

Application No. 10/727,627
Amendment dated June 27, 2007
Reply to Office Action of March 27, 2007

Docket No.: 3560-0135P

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) Device for image guided automated insertion of an elongated hollow needle to a desired location in an animal body for effecting radiation therapy of cancerous tissue in said body comprising:

- needle positioning means for positioning said needle having a distal end and a proximal end relative to said desired location;
- needle drive means for driving said needle with its distal end towards said desired location; and
- real time imaging means for creating and presenting an image of said desired location and the position of the distal end of said needle during insertion of said needle;

~~characterized in that~~wherein

the device is arranged for performing subsequent insertions using only one single needle,
wherein

Application No. 10/727,627
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Docket No.: 3560-0135P

the needle drive means are arranged for retracting said single needle from said desired location until the distal end of said needle arrives at a pivoting point, and wherein

said needle positioning means are arranged for repositioning said single needle relative to a subsequent desired location prior to a subsequent insertion by pivoting said needle around said pivoting point while said distal end of said needle is maintained in the pivoting point.

2. (Canceled)
3. (Currently Amended) A device according to claim 2, ~~characterized in that~~ 1, wherein said pivoting point is located inside said animal body.
4. (Currently Amended) A device according to claim 2, ~~characterized in that~~ 1, wherein said pivoting point is located outside said animal body.
5. (Currently Amended) A device according to claim 2, ~~characterized in that~~ 1, wherein said pivoting point is located at skin level of said animal body.
6. (Currently Amended) A device according to claim 1, ~~characterized in that~~ 5, wherein said needle insertion means comprise a guidance channel having a proximal end and distal end for accommodating said single needle.
7. (Currently Amended) A device according to claim 6, ~~characterized in that~~ wherein said needle positioning means comprise a robotic system connected to said guidance channel.

Application No. 10/727,627
Amendment dated June 27, 2007
Reply to Office Action of March 27, 2007

Docket No.: 3560-0135P

8. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein the proximal end of said single elongated hollow needle is connected to an after loading apparatus.
9. (Currently Amended) A device according to claim 8, ~~characterized in that~~wherein the proximal end of said single elongated hollow needle is connected to an after loading apparatus by means of a flexible catheter tube.
10. (Currently Amended) A device according to claim 8, ~~characterized in that~~wherein the after loading device is a radioactive seed loading apparatus, a HDR, PDR or LDR-device.
11. (Currently Amended) A device according to claim 8, ~~characterized in that~~wherein the after loading device is connected to the robotic system of the needle positioning means.
12. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein said single elongated hollow needle has an open distal end.
13. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein said single elongated hollow needle has a closed distal end.
14. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein said single elongated hollow needle is made of a non-ferromagnetic material, for example of a titanium-zirconium alloy.
15. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein the real time imaging means are ultrasound imaging means.

Application No. 10/727,627
Amendment dated June 27, 2007
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Docket No.: 3560-0135P

16. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein the real time imaging means are magnetic resonance imaging means.

17. (Currently Amended) A device according to claim 1, ~~characterized in that~~wherein the real time imaging means are computer tomography imaging means.

18. (New) A device according to claim 14, wherein said non-ferromagnetic material is a titanium-zirconium alloy.